

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Official Action of November 23, 2007, relating to the above-identified application.

By the foregoing amendment, applicants have extensively reviewed and revised the claims under examination and it is believed that all of the issues raised in the Official Action under the headings of "Claim Objections" and "Claim Rejections-35 U.S.C. §112", beginning on page 2 of the Official Action, have been overcome.

The subject matter of Claim 14 has been incorporated into Claim 1 to facilitate and expedite examination on the merits.

The claims in the case are Claims 1 to 13, 16, 18 to 28 and 30 to 40.

Claims 33 to 40 stand withdrawn from further consideration and applicants reserve the right to file a divisional application at the appropriate time.

The rejection of the claims under 35 U.S.C. §103(a) as unpatentable over *Yang, et al.*, "Catalysis Letters (2201)" pages 74 (3-4) and 221-225 taken with the *Eastman* patent, U.S. 4,389,304, and the patent of *Folkins*, U.S. 2,976,322, is respectfully traversed and reconsideration is respectfully requested.

The present invention is directed to a continuous process for the manufacture of methyl mercaptan by contacting in a reactor an intimate mixture of carbon oxides, sulfur or hydrogen sulfide and hydrogen as reactants at elevated temperatures and pressure in the presence of a pre-formed solid catalyst comprising an active component of the Mo-O-K-based species, an active

promoter which can be a mixture of oxides, sulfides or sulfides and oxides of an element selected from the group consisting of molybdenum, iron, cobalt, nickel, lanthanum, cerium and manganese. Optionally, a carrier can also be present such as silica. Various details and features of the invention are set forth in the dependent claims.

The publication of *Yang* discloses a catalytic reaction for a methane thiol synthesis in the presence of certain catalysts which can include potassium, molybdenum and the like. *Yang* differs from the present invention in that *Yang* does not teach that the catalyst has a promoter present. Attention is invited to example 3 of this application which shows that the process of the present invention exhibits a higher yield and selectivity compared to a process where the catalyst known from *Yang* is used.

The *Eastman* patent teaches a hydrodesulfurization of an organic sulfur containing compound and does not relate to a process for the manufacture of methyl mercaptan. The catalyst contains a calcined composition of a catalytic grade alumina to which titanium, cobalt, zinc and molybdenum have been added; see col. 3, lines 1 to 3. Compounds of these elements must be contained in the catalyst. Accordingly, applicants submit that a person skilled in the art would not combine or use the catalyst of *Eastman* with a completely different reaction system described in the present application.

With regard to the patent of *Folkins*, the reference uses promoters selected from the oxides of a metal in group IVB of the periodic table; that is, lead, tin and germanium; see col. 2, lines 15 to 17.

Accordingly, applicants respectfully submit that even if all the three references are taken into consideration and their teachings applied as proposed in the Official Action, a person skilled in the art would not arrive at the claimed invention.

Accordingly, applicants respectfully submit that the Official Action fails to make out a case of *prima facie* obviousness and, therefore, the rejection based on the combination of references should be withdrawn.

Favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

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